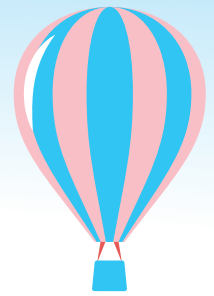




CASE STUDY: MAROOCHYDORE STATE HIGH SCHOOL



Peter Cook, teacher at Maroochydore State High School in Queensland and mentor to team Pyro Box in the 2017 Australian STEM Video Game Challenge, believes that the competition presents a valuable opportunity to overcome an enduring problem with teaching in classrooms.

'The difficulty that a classroom environment presents stems from a disconnection to real-world experiences,' Mr Cook said. 'We can provide students with rational problem-solving skills, but the development of intuitive skills usually only comes from interacting with, and testing your product on, real-life consumers.'

'The Australian STEM Video Game Challenge provides students with the opportunity to have their game played and judged by industry experts and consumers.'

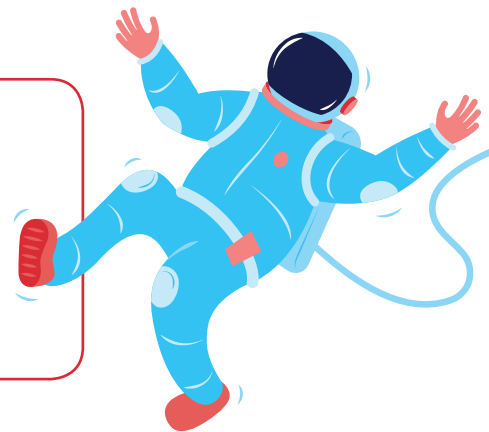
Mr Cook believes that this kind of real-world experience is invaluable.

'Once the product has been created, it is then necessary to ensure that genuine feedback is given to the students, allowing them to make improvements,' he said. 'The result for the students is to see their hard work is purposeful.'

'The beauty of software is that there is a worldwide community willing to support those that are trying to enter the industry.'

Pyro Box's game, *Shards of Azothornia: The First Shard*, won the 'Year 9–12: Playable Game developed in GameMaker' category in the 2017 Challenge. It featured a classic battle between good and evil: the Nameless Hero on a quest to recover the Five Shards of Galdor and the Necromancer Lord Malakor determined to stop him.

'The students are very enthusiastic about returning to the competition again. It provides students with positive outcomes. They are able to produce a tangible product that they are passionate about that could turn into a career for them.'



Mr Cook said that the structure of the Challenge supported some key curriculum points that are particularly valued at Maroochydore State High School.

'A lot of work at Maroochydore goes into developing student resilience and interpersonal skills,' he said. 'Groups that did not finish the game completely still walked away from the experience having further developed their skillset.'

Mr Cook said that planning and team management were crucial to success in the Australian STEM Video Game Challenge.

'The requirement of the Game Design Document was invaluable in demonstrating to students the need to plan [and] industry leaders in the panel discussion after the awards presentation further reinforced the need for effective planning for success,' he said. 'The curriculum in the senior years focuses on planning and designing, and then implementing the product.'

Discussing the Challenge's option for students to enter either individually or in teams of up to four members, Mr Cook said, 'Students that preferred to work as part of a team, and accepted the positives and negatives that this presented, were more successful.'

A particularly pleasing outcome for the Maroochydore team was social development, with students forming strong friendships with their teammates. But Mr Cook also took something away from the experience.

'One of the highlights for me personally was to see and hear how much time and effort the students had put into their project,' he said. 'Some had used most of their holidays, weekends and spare time on this task [and they] received a massive amount of support from friends and family and teachers.'

'The enthusiasm and dedication displayed was incredible.'

As well as the expected gains in programming and game design skills, Mr Cook believes his students took leaps and bounds in confidence.

'The competition provided students with a lot of confidence in their ability,' Mr Cook said. 'Their performance against the rest of the country has given them a new sense of belief and determination.'

'They are now convinced that they can compete on a world stage and that location no longer determines success.'

He said students are also looking further afield, at international competitions, as a result of the confidence they have gained in the Australian STEM Video Game Challenge.

A knock-on effect has been the amount of interest in competing in the 2018 competition.

'We now have more teams ready to compete next time,' he said.



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